

FINAL DRAFT

**THE
GROWING
VULNERABILITY
OF
SMALL ISLAND DEVELOPING STATES**

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THE GROWING VULNERABILITY OF SIDS

1. INTRODUCTION

This paper synthesizes earlier studies of the three types of vulnerability that pervade small island developing states (SIDS) -- economic, social, and environmental. This triple handicap arises from the interplay of a wide variety of factors: their size, geographic dispersion (and, in many cases, remoteness); their vulnerability to natural disasters; the fragility of their ecosystems; their isolation from markets and their limited internal markets; migration (particularly of highly skilled citizens); their limited commodities and consequent dependence on imports; and their limited ability to reap the benefits of economies of scale. Though they share all these problems in varying degrees, the SIDS -- which now number 43 of the 191 Member States of the United Nations -- are even more diverse culturally than most of the world's countries; they range from Malta through Mauritius and are found in all geographic regions. The paper calls attention to the implications of vulnerability for governance and for trade regulation, as distinguished from the considerable body of existing work on the concept in its economic, social and environmental dimensions. The authors also present a series of recommendations for reinforcing the resilience of SIDS, including proposals for education and WTO negotiations.

In addition to the problems faced by all developing countries, small island developing states (SIDS) experience specific problems that arise from the interplay of a number of special factors. Among these are their smallness, remoteness, geographical dispersion, vulnerability to natural disasters, the fragility of their ecosystems, constraints on transport and communication, isolation from markets, vulnerability to exogenous economic and financial shocks, a highly limited internal market, lack of natural resources, limited fresh water supplies, heavy dependence on imports and limited commodities, depletion of non-renewable resources, migration (particularly of personnel with high-level skills) and their limited ability to reap the benefits of economies of scale. Exhausting as this list may seem, it is hardly exhaustive. In the early 1990s, a new grouping of developing countries made its debut in the international negotiations on Climate Change. The Alliance of Small Island States (AOSIS) emerged as a coalition of island countries and low-lying coastal countries. AOSIS now comprises 43 Member States and Observers from all the regions of the world. They share a common aspiration for economic development and improved living standards, while remaining strongly committed to conserving the natural and cultural heritage upon which their future existence depends.

The obstacles to sustainable development are very similar throughout the Member States of AOSIS. In addition to those sketched above, they now face that of global warming, which threatens their very existence through climate change and sea level rise; the entire territories of at least ten small island developing States are barely one metre above sea level. In addition, all the SIDS have highly vulnerable coastal zones where the majority of the population live and work.

This particular set of circumstances was codified in Agenda 21 as a “special case”, a recognition was later expanded upon at the United Nations Global Conference on the sustainable development of Small Island Developing States held in Barbados, and the Program of Action adopted there. The particular status was reiterated by the United Nations General Assembly, and is included in numerous international treaties and agreements. Recently, the Millennium Summit of World Leaders expressed their commitment:

“We also resolve to address the special needs of Small Island Developing States, by implementing the Barbados Programme of Action 5 and the outcome of the twenty-second special session of the General Assembly rapidly and in full. We urge the international community to ensure that, in the development of a vulnerability index, the special needs of SIDS are taken into account.” (Paragraph 17)

However, one may well ask if any significant improvement in the situation of SIDS has taken place since the adoption of the Barbados Programme of Action (BPOA) in 1994.

Although SIDS differ in size, shape, wealth and resources and experience similar constraints to varying degrees, they all experience certain site-specific constraints. Because all SIDS are largely coastal entities, all face the waves of the oceans. However, some SIDS are particularly vulnerable in this respect. All SIDS have access to fisheries, but only a few are able to exploit this resource for commercial profit. All SIDS have some vegetation and agriculture. But some SIDS have poor, sandy coral soil, and can only produce few crops. All SIDS have water. But some have to rely on harvesting rainwater from their rooftops in order to survive. All SIDS have educational institutions, but only some have universities. Most SIDS have cohesive societies, given the small size and the unique cultures. But not all SIDS have been able to maintain that social cohesion in the face of economic development. Clearly, among SIDS, there is great diversity as well as similarity.

The Barbados Plan of Action

The BPOA, representing a blueprint for sustainable development of SIDS, has received wide, enthusiastic international support because its ideas are regarded as sensible and pragmatic. The notion that SIDS could become laboratories where sustainable development could be put into practice, as demonstrations for other larger countries, was one that SIDS strongly endorsed. Most of all, of course, constitutes the recognition that SIDS had to take certain steps if they were to survive the changing global situation. The Secretary-General of the United Nations requests information from donor countries, SIDS and UN agencies annually regarding BPOA’s implementation. Responsiveness

varies from year to year, but an overall picture has emerged. It has been estimated that while BPOA is not yet fully implemented, 70 per cent of the tasks and actions it stipulates have been carried out by the SIDS themselves.

SIDS have reported on very valuable lessons from regional and inter-regional cooperation in numerous sectors as a result of BPOA. Exchanges and information-sharing has spurred collaboration and a greater understanding of common problems. Solutions tried in one region have been adapted for others, thus providing a broad foundation for greater collaboration. One valuable achievement has been the establishment of SIDSnet, a dedicated facility housed in UN-DESA, that provides information and communication support to many SIDS.

However, a harder lesson has been that sustainable development, with its key premise of integration, information and participation, is a relatively difficult concept around which to build policy. The governance of most SIDS is organized sectorally, along such lines as energy, agriculture, and health. Consequently, although government leaders and senior policy-makers increasingly mention sustainable development in speeches, a very limited number of new policies are integrated across sectors or stimulate significant public participation. In fact, economic issues are usually divorced from environmental considerations and there is very weak capacity for social planning. Another obstacle to developing policy that addresses sustainable development – outside the natural resource and environment portfolio -- is the lack of available quantitative tools that would allow for effective monitoring and corrective actions when needed.

2. THE CONCEPT OF VULNERABILITY – A UNIQUE FRAMEWORK FOR ADDRESSING SIDS DIVERSITY AND SIMILARITIES

Vulnerability is not the same thing as poverty or economic underdevelopment. There are a number of Small islands states - Singapore, Cyprus and Malta – that are economically vulnerable, but have managed to generate high income per capita. Indicators of economic underdevelopment should be clearly distinguished from those purporting to measure vulnerability. The former are generally based on income per capita, sometimes augmented by social or quality-of-life variables, such as education and health, or by economic-structure variables, such as the relative size of the agricultural sector. Based on experience to date, it may be argued that economic underdevelopment is associated with the limited capacity to manage vulnerability and to enhance resilience

The concept of vulnerability provides a unique framework that addresses the similarity and diversity of SIDS. Vulnerability indices, determined by internationally recognized methodologies, provide a new tool and frame of reference to help planners and decision-makers monitor the outcome of policy interventions. For countries like SIDS that are committed to sustainable development, it is now possible to monitor progress or regression scientifically.

Conceptually, vulnerability provides an easier context for understanding how a particular SIDS is responding in a comprehensive manner to the economic, environmental and social challenges it faces. The concept of vulnerability management -- the equivalent of risk management in the private sector -- should also help the donor community and international agencies become more effective and efficient in the delivery of technical assistance, especially as these resources dwindle.

The development of tools to measure economic, social and environmental vulnerability will provide a basis for understanding the special case of SIDS, as well as the mechanism that will support SIDS in pursuing the paradigm of sustainable development more effectively. For instance, the unique sustainable development needs of SIDS cannot be understood using traditional criteria such as per capita income, GDP measures and GNP. Consequently, SIDS' special needs are not properly communicated. Everyone can claim vulnerability, but the extent of vulnerabilities affecting SIDS is such that SIDS' sustainable development goals (economic, environmental and social well being) cannot be met by conventional categories of development action or assistance. The majority of such goals are thereby undermined.

In its deliberations on the definition of the list of Least Developed Countries, the United Nations Committee for Development Policy has noted an interesting issue for the Least Developed Countries (LDCs) among the SIDS: many of them are not able to take full advantage of the privileges and opportunities open to LDCs. The causes relate to the islandness of the SIDS, what UNCTAD has referred to as the “island paradox”. There are many ancillary requirements to duty-free entry of agricultural products into certain

industrialized countries, and this requires a capacity in the LDCs for phyto-sanitary inspection. Hence the opportunity is missed. Other opportunities may be missed because of lack of information or slowness in submission of approval forms. Since most SIDS have an economic structure that is close to LDC status – and the regional development banks treat many “as if” they were LDCs – it is likely that they have lost other opportunities as well.

In discussions at an AOSIS Workshop on Trade and Sustainable Development in Montego Bay, Jamaica, in 2001, the experts and delegates agreed that SIDS fit poorly within the pre-conceived ideas of LDC, Developing Country (DC) and Industrialised Country (IC). And while there may be many similarities with so-called small states, SIDS have unique situations and features. This recognition has not been forthcoming in the discussions of the World Trade Organisation (WTO) that have focused on small economies – a concept that will perhaps be clarified as small, vulnerable economies.

Therefore, a greater and more intensive discussion with industrialised WTO members on SIDS issues may be required. But this raises the issue of participation in international processes. With small administrations, many SIDS find it increasingly difficult to fully engage themselves in all of the important international processes. WTO has been highlighted as one of the most costly, complicated and time-consuming processes at the international level, one which many SIDS have simply abandoned; of the 43 AOSIS Members, there are 20 full WTO Members, but only a few participate on a regular basis. Again, the issue becomes whether or not an “opportunity” that is available (WTO membership, and with special considerations for LDC SIDS) is actually within grasp of all SIDS.

In 1992, when the SIDS were preparing for the Rio Summit, a holistic comprehension of the challenges they faced barely existed. This may be part of the reason why the work on a vulnerability index was given so warm an endorsement at the Barbados Conference in 1994. The process has shown that the dimensions of the debate are changing. Ten years ago, SIDS themselves had perhaps only a limited perception of their vulnerability. In 2002, SIDS actually have the tools to be able to measure their economic and environmental vulnerabilities, and to quantify concerns and challenges that face them. And with this greater knowledge has come the realisation that many of the development activities undertaken, even since 1994, have actually contributed to increasing their vulnerability.

In preparing for the 2002 World Summit on Sustainable Development and the upcoming Barbados plus 10, SIDS, with support from UNDP Capacity 21, needs to deepen the international development community’s understanding of the concept of vulnerability and why it is important in governance. Additionally, there is need to recognize the vulnerability index tool as the most appropriate to help these island states pursue sustainable development.

Vulnerability

The term “vulnerability” refers to proneness to damage from external forces. Economic vulnerability is interpreted as the risks faced by economies from exogenous shocks to the systems of production, distribution (including and especially markets), and consumption. This is a dynamic macro-economic perspective that focuses on impacts of shocks on the processes of economic growth and economic development and, in the extreme cases, on the survival of sections of the population².

Economic vulnerability arises largely from the very high exposure of small states to economic conditions in the rest of the world. The economies of SIDS frequently experience “shocks” by external factors originating in major global commercial centres, sometimes leading to serious instability. Several studies conclude that the economies of SIDS therefore tend to be very volatile in terms of GDP and exports. One type of exogenous shock originates, of course, in natural forces, such as the destruction of tourist facilities by a hurricane or typhoon. The ECLAC study gave examples of damage to selected Caribbean economies caused by hurricanes in 1995, with estimates as high as 105.2 per cent of GDP in St. Kitts and Nevis and 147 per cent of GDP in tiny Anguilla.³

Environmental vulnerability is concerned with the risk of damage to the country’s natural ecosystems (e.g., coral reefs, wetlands, fresh water, coastal areas and marine resources, forests, and soils). Each of these resources is essential in providing services to the economy and society. Degradation in the quality of the environment’s resources lessens the level of service it can provide to meet domestic needs and contribute to export earnings. Use beyond what is sustainable results in irreversible damage in the longer term. Natural environmental resources may be affected by natural and anthropogenic hazards, the risk of which may vary with time and place, but can be significantly influenced in terms of impact by social behavior.

Social Vulnerability reflects the degree in which societies or socio-economic groups of people are affected negatively by stresses and hazards, whether brought about by external forces or intrinsic factors – internal and external – that negatively impact on the social cohesion of a country. While the social vulnerabilities caused by these stresses and hazards are no more endemic to SIDS than to other developing countries, the natural recurrence rate in SIDS is higher. Given SIDS’s limited capacity to respond adequately, the social impact of such stresses could literally last forever.

Social vulnerability is characterised by increased growth in criminal activities, growing rates of HIV/AIDS infection, growing rates of children dropping out of school, declining

² “One of the central themes that informed the deliberations at the United Nations Global Conference on Small Island Developing States was the proposition that the “sustainable development capacity of SIDS was severely undermined by a number of characteristics that were unique to such entities and which trans-late into specific development problems that impede their achievement of such development”, ECLAC, 2000, P.2

³ 3 Ibid, see Table 2 p.5.

age of prison population, declining public health, rotting public infrastructure and migration of skilled professionals.

In terms of the academic maturity of vulnerability indices, economics is the most advanced followed by environmental vulnerability; social vulnerability indices remain in the very early stages of development. To a significant degree, social vulnerability will be influenced by economic conditions and, increasingly, by environmental conditions. Social conditions do in turn influence and impact on both economic and environmental conditions. Despite their obvious complex nature — which has required the development of vulnerability theory to provide a frame-work for logical development and measurement — the numerical outcomes of all three types of vulnerability indices are easily verifiable in terms of daily life.

Among the lessons learned by SIDS during the 1980s and 1990s, was the importance of the skilled professional — how easily they move and how costly it is to replace them, forcing counties to obtain services they provide from external sources. The ongoing disproportionate recruitment of professionals from SIDS to meet demands in OECD countries is increasing the vulnerability of the islands' societies. In the majority of cases, OECD countries fail or refuse to make the investment in human resources development, choosing to treat it as an externality and then subsequently choose to meet demand by recruiting from less developed economies that have made the investment they require in human resource development and are now deprived of the services of these professionals. The OECD countries justify such behavior as free-dom of movement, despite its blatantly disproportionate nature in one set of societies.

The research team strongly urges SIDS governments to collectively pursue international agreements and formulation of national legislation on rules for the recruitment of skilled professionals in order to ensure that the social investment made in the developing of professionals provide benefits to the country that made the investment. Additionally, the research team, recognizing existing comparative advantages that SIDS have in training certain categories of professionals (nurses, teachers, engineers, doctors), recommend that SIDS evaluate the feasibility of privatizing such training, which would be regarded as a new global service.

The Vulnerability Index

The vulnerability index was developed in the follow up to the United Nations Global Conference on the Sustainable Development of Small Island Developing States, since it was felt that the measurement of vulnerability would benefit a great number of countries worldwide. The idea of constructing the index was first formally proposed by Malta on June 26, 1990, during the meeting of Government Experts of Island Developing Countries and Donor Countries and Organisations, held under the auspices of the United Nations Conference on Trade and Development (UNCTAD).⁴ When the General Assembly, at its 47th session, resolved to convene this SIDS Global

⁴ The construction of such an index was first formally proposed by the Maltese Ambassador to the United Nations in June 26, 1990, during the meeting of Government

Conference (A/Res/47/189 of 10 March 1993), subsequently held in Barbados in April 1994, the vulnerability index featured prominently in the Conference's draft programme of action, later endorsed by the General Assembly in its resolution 49/122 of 19 December 1994. Paragraphs 113 and 114 of the programme called for the development of a vulnerability index (indices) for Small Island Developing States (SIDS) as follows:

“Small Island Developing States, in cooperation with national, regional and international organizations and research centres, should continue work on the development of vulnerability indices and other indicators that reflect the status of Small Island Developing States and integrate ecological fragility and economic vulnerability. Consideration should be given to how such an index, as well as relevant studies undertaken on Small Island Developing States by other international institutions, might be used in addition to other statistical measures as quantitative indicators of fragility.”

“Appropriate expertise should continue to be utilized in the development, compilation and updating of the vulnerability index. Such expertise could include scholars and representatives of international organizations that have at their disposal the data required to compile the vulnerability index. Relevant international organizations are invited to contribute to the development of the index. In addition, it is recommended that the work currently under way in the United Nations system on the elaboration of sustainable development indicators should take into account proposals on the vulnerability index.”

In 1996, the Commission on Sustainable Development called on “the relevant bodies of the United Nations system to accord priority to the development of the index.” Subsequently, in 1997, the Department of Economic and Social Affairs engaged two consultants,⁵ one to develop an economic vulnerability index and the other to develop an ecological vulnerability index. The Department also convened an ad hoc expert group to review the technical work of the consultants and to make appropriate recommendations. The meeting, held at United Nations Headquarters in December 1997, concluded that, “...as a group, small island developing States are more vulnerable than other groups of developing countries.” (A/53/65 E/1998/5).⁶

Experts of Island Developing Countries and Donor Countries and Organisations, held under the auspices of UNCTAD. In his speech, the Maltese Ambassador suggested that a vulnerability index be constructed, stating, inter alia, that such an index. “is important because it reiterates that the per capita GDP of Island Developing Countries is not by itself an adequate measurement of the level of development of island developing countries as it does not reflect the structural and institutional weaknesses and the several handicaps facing Island Developing Countries.” Subsequently UNCTAD engaged Lino Briguglio to prepare a paper on the construction of a vulnerability index which was one of the main documents discussed during a meeting of a Group of Experts on Island Developing Countries, held in Geneva on 14-15 July 1992.

⁵ These were Professor Lino Briguglio of the University of Malta and Dr Dennis Pantin of the University of the West Indies.

⁶ The report of this meeting is carried on <http://www.un.org/documents/ecosoc/docs/1998/e1998-5.htm>.

Vulnerability And Economic Underdevelopment

It should be emphasised at the outset that vulnerability is not the same as poverty or economic underdevelopment. There are a several SIDS – among them, Singapore, Cyprus and Malta – that are very vulnerable economically, but have managed to generate high income per capita in spite of their island conditions. It is therefore possible for many SIDS to build up their own resilience against vulnerability. Indicators of economic underdevelopment should be clearly distinguished from those purporting to measure vulnerability. The former are generally based on income per capita, sometimes augmented by social or quality-of-life variables, such as education and health, or by economic-structure variables, such as the relative size of the agricultural sector. It may be argued, however, that economic underdevelopment may be associated with the limited ability to manage vulnerability and to enhance resilience.

The Present Status of SIDS Vulnerability

The research team found that during the 1990s, SIDS became more vulnerable, largely because of global climate change and sea level rise, even though some may have reduced environmental vulnerability through new policies and legis-lation, and others may have attracted meaningful levels of FDI to help diversify economies and reduce their economic vulnerability. This finding is consistent with that of the Commonwealth Secretariat/World Bank Joint Task Force report (2000), which states that small states share a number of development challenges that result in them being, *“especially vulnerable to external events including natural disaster; that cause high volatility in national incomes; many of them are facing an uncertain and difficult economic transition to a changing world regime; and they suffer from limited capacity in the public and private sectors⁷”*.

The research team identified the following as indicators of trends that are leading to increased economic vulnerability on the part of SIDS:

- greater exposure to globalisation trends as a result of WTO regime of tariff reduction and other WTO rules;
- growing indebtedness;
- steady depletion of natural resources (minerals, forest, freshwater, fish stocks);
- reduced possibilities of diversifying their economies;
- reductions in donor assistance;
- growing dependence on tourism;
- continued designation of per capita income as the principal determinant of development assistance benefits;
- slow incorporation of ICT;
- the pending loss of lucrative historical markets without clearly elaborated strategies as to how to minimize loss of revenue and employment;

⁷ “Small States: Meeting Challenges in the Global Economy.” Report of the Commonwealth Secretariat/World Bank Joint Task Force on Small States, April 2000..

- failure on the part of the international community to act on climate change during the decade of the 1990s, when economic expansion was at its historical highest level and development aid underwent the greatest reductions since its inception in the late 1940s.

As a result, SIDS will have to divert resources intended for social investment to addressing climate change and sea level rise caused not by small island states, but by the richest countries on the planet. For example, Maldives, as a result of rising sea level and the threat posed to the population, has had to divert Japanese assistance originally intended to support educational infrastructure (building schools, ICT) into the building of coastal defense structures around the capital, Mahlee - cost of the structures, US\$4000 per metre.

The social vulnerability changes in SIDS can be explained in terms of

- the ongoing loss of experienced skilled professionals to larger countries;
- growing population and changing consumption patterns;
- increasing levels of unemployment and under-employment;
- growing dependence on food imports to meet domestic needs;
- limited progress in developing and deploying science and technology to address common development challenges;
- rising criminal activity and drug use; and
- loss of social cohesion and cultural values and practices.

Ecological degradation continued during the decade, making SIDS' environments more vulnerable to irreversible damage. Such damage would significantly reduce environmental services and opportunities for livelihoods /employment. There is, however, growing awareness of some environmental problems, such as the pollution of fresh water; coastal and marine pollution; loss of biodiversity; loss of soil fertility and deforestation. However, there is less awareness of the growing shipments of toxic material, including nuclear waste, through SIDS ocean space; or the rising temperature of the ocean and the bleaching of our most valuable natural resource - the coral reefs; and the more frequent occurrences of natural disasters and destructive weather systems, e.g., El Nino/La Nina or global warming that are likely to cause severe damage to critical ecosystems that are the basis of the tourism and fisheries industries. SIDS' populations, however, continue looking to their governments to take the necessary actions and depend increasingly on these governments.

Government and governance

The responsibility for leadership to reverse the current trend of growing vulnerability falls squarely in the domain of government. A major challenge will be resolving the conflicting advice and requirements regarding the role of government and its corresponding size and structure. On one side, the governments of SIDS are being urged to: implement decentralisation; reduce the size of the public sector; adopt the Agenda 21 principles of citizen participation and consultation; and effectively participate in and fulfill reporting requirements under international agreements either linked to the rapid pace of globalization or to environmental degradation.

Additionally, international agreements on trade call on SIDS to take certain policy decisions that are very likely to negatively impact revenues for the public sector and subsequent social investment -- for example, the WTO requirement to reduce tariffs on imports in order to facilitate free flow of trade. In industrialised and industrialising countries, tariffs are a possible mechanism for protecting domestic industry and negatively impact free trade. In SIDS, there are a very limited number of domestic industries and tariffs are the principal means of sheltering them from the economic damages of increased imports and of collecting revenue for the public sector.

It is imperative, in the opinion of the research team, that the state take on certain economic activities in its partnerships with the private sector and civil society organisations in order to reduce vulnerability. For example, in some SIDS, only the state is capable of bulk purchasing to ensure the regularity and quality of the supply of staples and other basic commodities. In this regard, the activities of state enterprises should not be considered as necessarily trade distortive.

Case evidence confirms that despite the growing recognition that the development challenge is different and more difficult because of the peculiarities of SIDS, this is seldom taken into account when donors or international organizations enter into agreements. For example, SIDS are being advised to privatise their relatively small utilities (water, electricity, and communications). As a number of Caribbean SIDS are finding, this advice is resulting in escalating costs of utilities. In the case of electricity, increases in costs have resulted in significant loss of textile jobs to countries with cheaper energy. High energy costs usually correlate with low wages. Given the unique nature of the electricity sector in SIDS, was a model developed for the UK the most appropriate for small island states? Was any serious analysis carried out before this model was recommended to SIDS as the prime means of mobilizing investments for generating electricity?

SIDS need to devote more resources to analysing and evaluating the appropriateness of donor prescriptions and conditionalities imposed on aid with a view to whether or not these stipulations will make them more or less vulnerable, or reduce resilience. Consider the case of food security. The vast majority of resources devoted to agriculture in SIDS is directed at the production of commodity crops (sugar, bananas, copra, coffee), a legacy of the colonial history and products for which the unit value continues to decline as once lucrative preferential agreements are dismantled by WTO. The dismantling of these

historical agreements without implementing alternatives is resulting in an increased vulnerability of farmers and their households. While forcing SIDS to depend increasingly on the international market, WTO is ironically seeking to lower tariffs on food imported into SIDS – tariffs that are, inter alia, a source of revenue for domestic investment in industries that would increase the number of SIDS citizens who can afford to buy imports. Does this kind of tariff reduction benefit SIDS, and will it lead to improved food security?

Reducing the overall vulnerability of SIDS will require governments to aggressively contest external advice and conditionalities that would reduce opportunities for exports/import substitution based on indigenous resources – among these, renewable energy. The research team concluded that given the capabilities of the private sector in most of SIDS, the minimal flow of FDI that is strongly linked to the perceived vulnerability of SIDS, and the limited market infrastructure in place that does not yet allow effective and efficient operation of market forces, governments will have to play a greater -- not reduced -- role to lessen the growing vulnerability of SIDS.

Reducing environmental vulnerability will also require providing the necessary social, educational and economic support for the protection of natural resources on which all development is predicated in SIDS. In small societies, especially where the domestic sector is weak and undeveloped, the role of government must necessarily be more interventionist than in large and more developed economies. However, the need to rationalise public expenditure in a situation of chronic budgetary deficits, to improve the quality of public goods and services and to control increasing demand for such goods and services, has brought into question the capacity of government to continue to serve as the main and direct providers.

The engagement of the governments of many SIDS, especially those in the Caribbean in their current range of functions, has its genesis in colonial history. The transition from colonial administration to self-government and finally to political independence heightened the consciousness of community leaders as to the social responsibility of government to provide basic services to a highly dependent population. Furthermore, the collapse of the plantation economy left an extremely vulnerable and disorganised private sector dependent on protected markets, import trading and various forms of government intervention. Unlike many other countries, the Caribbean region did not have the advantage of significant industrial progress before entering into a fully democratic and liberal system of governance. It is not surprising therefore, that in many SIDS, governments have had to assume a role beyond that of regulator — to the point where their influence dominates every aspect of social and economic life and the public sector derives most of its revenues from tariffs on trade, including tourism where that is a major trade area.

Government, the research team concluded, has a significant role to play and that the small size of SIDS makes that role larger, relative to the situation in other countries. A major challenge of government, as it seeks to reduce national vulnerability, will be increasing its own efficiency and effectiveness. Government will have to do a better job of

differentiating causes and symptoms, identifying linkages and optimizing the potential returns on limited investment resources. The framework for achieving much of this is detailed in the Barbados Plan of Action. Unfortunately, as the United Nations Secretary-General stated at the Special session on SIDS in 1999, limited capacity and resources have significantly hindered progress in implementing the BPOA by SIDS. SIDS need to give serious consideration to developing a partnership with donors to address this as a matter of urgency.

Getting policies right is proving to be very difficult. Those being formulated seem to attract investment largely in one sector, tourism – rather than the economic diversification that might supplement national income or absorb exogenous shocks. As SIDS' economic futures become disproportionately more tourism-focused, their vulnerability increases.

Notwithstanding the general current towards leaner administrative structures, economic liberalisation and an increasing concern for the environment is bringing with it an increased requirement for regulatory activity. Equally, the strong pressure towards consumer-oriented services is leading to requirements for more, not less government, with an emphasis on transparency rather than size. While this role for government may run contrary to the prevailing donor paradigms of development, no market forces are available or emerging to play an expanded role in reducing vulnerability.

3. RECOMMENDATIONS FOR VULNERABILITY MANAGEMENT

In an era of rapid change in the international economy -- the redirection of investment flows away from primary producing activities, the quick outflow of capital from troubled markets (for example, the Asian financial crisis of the late 1990s), and the need for adjustment to external shocks -- the management of vulnerability challenges SIDS immensely. The research team concludes that two fundamental principles must guide the management of reduction in national vulnerability of SIDS:

- minimising the risks from external shocks; and
- maximising these countries' environmental, economic, and social resilience.

Both require that SIDS engage the changing international economy on terms that facilitate their sustainability and viability in the emergent global systems for economic development and environmental protection. To maximise resilience, SIDS must develop and implement the appropriate strategies to diversify and differentiate their economies so as to harness the full potential of their human and natural resources (particularly the oceans and renewable energy resources) to tap more dynamic markets than they have traditionally done, while simultaneously protecting the natural resources and critical ecosystems from negative unintended consequences, and keeping their skilled professionals from migrating.

The recommendations are therefore directed foremost at governments, but also international and regional development assistance organizations, as well as bilateral donors. The recommended actions are at three levels: the national, regional and inter-regional, and international. Given the structure of most government systems, the actions are presented by sectors.

a. Managing vulnerability

The research team concluded that for the SIDS to reduce vulnerability innovative approaches to existing challenges in the following key areas are required:

Sustainable Energy

The research team confirms that energy has long been and remains a major Achilles heel of SIDS economic development ambitions and plans. As the research report confirms, energy shocks are among the most frequent and disruptive external shocks experienced by SIDS. The volatile nature of the global energy market in relatively short periods derailed economic growth and fueled inflation in many SIDS. These energy crises have also contributed significantly to costly episodes of social unrest, much of it violent. A significant portion of the external indebtedness of SIDS during the 1970s and 1980s resulted from petroleum volatility. Indebtedness today manifests itself in less-than-desirable credit ratings and higher costs of borrowing externally, requiring a significant portion of foreign exchange earnings to service debt.

SIDS have as great an endowment of renewable energy resources as many other countries. As the research team concludes, reducing dependence on petroleum through the development of renewable energy and efficient use of energy would reduce vulnerability in SIDS.

Global warming and associated climate change and sea level rise, the research team points out, is going to increase SIDS vulnerability in the majority of cases. The emissions responsible for changing the atmospheric chemical composition that drives global warming is the waste product from the use of petroleum to provide energy. SIDS, therefore, have a double vested interest in developing renewable energy. The governments and people of SIDS need to become educated about the importance and the relationship of these two issues – renewable energy and climate change – and then to put in place capacity and mechanisms to undertake collective research, development and commercial demonstration of renewable energy systems. The team recognises that the only way to overcome the limited financial and science and technology capacity is through cooperation.

Buildings that can be designed and constructed to generate their own energy are seldom encouraged by energy policies, and seldom is the agricultural sector considered when making energy policy, despite the fact that many agricultural activities have potential for providing energy. Additionally, imported energy is used at low efficiency, as there is little emphasis or policies on the efficient use of energy. The public sector has had difficulty in developing integrated policies for the energy sector to be linked with the rest of the economy. But such policies lie at the core of sustainable development planning.

Sustainable energy services are the foundation of sustainable development. SIDS need to significantly increase commitment to training energy professionals. Few of the tertiary institutions in SIDS offer graduate programmes or adequate research in the areas of energy management or renewable energy development.

The existing capacity in SIDS is often limited to petroleum distribution management and electricity generation. This limited capacity has resulted in great dependency on foreign experts. The size of the energy systems in SIDS are so small that those norms that apply in larger countries may not apply in SIDS. Consequently, in the majority of SIDS, energy policies, where they exist, seldom have synergistic linkages with other sectors, so opportunities to generate energy as part of providing sound sewage treatment or waste management are not considered. Continuation of business as usual will make SIDS even more vulnerable societies.

Recommendation 1: National level – Assess the need for the establishment of a national energy advisory committee

Assess feasibility of establishing a national advisory mechanism to help government in developing policies for regulation of the energy sector; for increased efficiency in the use of imported energy; catalyze the development of renewable energy resources; and evaluating options for the more energy efficient public transportation.

Recommendation 2: Regional level – Feasibility of using regional development banks as facilitators for technology transfer.

Evaluate the feasibility of using regional development banks to facilitate the transfer of technology for the efficient provision of energy services. This is increasingly important because the bigger development banks, including the World Bank, are no longer making energy loans.

Recommendation 3: Inter-regional level – Feasibility of ICT-based inter-regional energy graduate and specialized training and research programme.

Evaluate the feasibility with a view to initiate action for the establishment of a graduate training and research program in energy management and renewable energy development, where appropriate. Also, establish diploma and certificate courses via ICT-based distance education as partnerships between regional universities and community colleges. A working group of energy professionals and colleagues from academia could be tasked to undertake this task.

Recommendation 4: Inter-regional level – Undertake a study to review the impacts of privatization on the character of electricity generation and distribution.

Review the impacts of privatization on the character of electricity generation and distribution, specifically to determine if this leads to improved reliability and efficient generation and distribution to the benefit of the consumer and whether it is conducive to the development of environmentally sound forms of energy generation..

Recommendation 5: International level – Evaluate feasibility of an international SIDS

Investment Fund to finance investments in energy efficiency and renewable energy.

Evaluate the feasibility of setting up an international investment fund for SIDS to provide capital. Each energy loan should always include a percentage for capacity-building and support for research and development. Simultaneously, with accessing the viability, SIDS governments should be actively promoting increased investments in renewable energy and efficient end user technologies. Government should actively promote partnerships between SIDS-based energy companies.

Trade

Based on the key issues in the area of trade, the research team makes the following recommendations it considers essential to addressing trade-induced economic, social and environmental vulnerability:

Recommendation 1: Inter-regional level – Evaluate the viability and requirements for a common approach and capacity to the WTO negotiations.

Special considerations will be largely for corrective action, as SIDS that were outside the multilateral trading systems during the Uruguay Round did not secure any real special consideration. As there is strong resistance by some WTO members to providing special treatment for small economies, SIDS will have to make a very good case – which will require very effective collaboration among them. This, in turn, will necessitate discrediting the flawed per capita income index that is the basis for negotiation on special considerations, and effective use of the indices that monitor vulnerability.

Whereas the Governments of SIDS have weak institutional capacity, it is proposed that serious consideration be given to the establishment of an inter-regional negotiating team to handle the ongoing WTO negotiations including the Intellectual Property Rights. The team would essentially be a technical network of SIDS trade and inter-national negotiators. It could be part of TCDC (Technical Cooperation among Developing Countries) helping to improve technical analysis and strengthening of negotiating skills for participation in WTO negotiations. This appropriately resourced mechanism would be along the lines of what is now supported by the Commonwealth Secretariat in Geneva.

Among the special provisions that SIDS should pursue are:

- Preventing excessive tariff reduction – SIDS, by the nature of their economies, rely heavily on taxes on international trade to generate revenue. The WTO effort to achieve extensive tariff reduction could, in the opinion of the research team, cause budget deficits. The WTO needs to be convinced of the necessity of granting greater flexibility to SIDS with regard to their tariff liberalisation. In the forthcoming tariff negotiations, SIDS must not be required to make further commitments to reduce tariffs and to bind their tariffs beyond their trade, development and financial needs. Doing so would further increase economic stress and vulnerability.
- Exemption from the non-subsidy ruling in key sectors with new investment and the development of new industries to meet the internal needs in critical areas such as energy, potable water, fisheries and food processing. The justification for such a position would be based on the diseconomies of small scale, the dependence on imported technology and

finance, the export concentration in single products and over-dependence on specific overseas markets that make the SIDS vulnerable to international trade shocks.

Large economies like the EU and USA are allowed to keep subsidy scheme based on arguments that they must protect the economically vulnerable workers (primarily in the agricultural sector). SIDS cannot influence the international prices of their exports to their advantage. They have to face wide fluctuation in prices accompanied by high inflation, volatile exchange rates and trade deficits. These contribute to massive losses of export earnings that are vital for their development. The export patterns of SIDS are so narrow in terms of product coverage that their total value of exports remains insignificant in comparison with the total volume of exports of other countries; hence, they have little capacity to distort international trade. SIDS needs to maintain certain type of support measures that are crucial for them to pursue their economic and industrial development strategies.

- **Special Market Access** - In the forthcoming WTO negotiations on market access, SIDS need to seek more favorable treatment in terms of market access for the historical exports from the vast majority of SIDS. This special market access would remain until an agreed level of FDI is achieved. SIDS traditional trading partners should assist SIDS in ensuring that there is no further loss of preferential markets, and that mechanisms are established to help SIDS make the transition to other goods and services. Without this support, there is a risk that not only these countries would be further marginalised, but also they may well jeopardise the multilateral trading system itself.
- **Support for domestic industries** – particularly those that are adding value to natural resources in an environmentally friendly manner and have the potential to provide sustained employment. Such industries are also most likely to be the ones on which future industries will develop helping diversification and minimising vulnerability of SIDS economy although the WTO provides contingency measures to protect domestic industry in the event of emergency situation, these rules are complex, costly and lawintensive and are therefore not easily utilized by SIDS. It is recommended that SIDS seek flexibility or policy space to be able to provide redress and/or support measures to industries important to their development strategies.
- **State Trading Enterprises** – SIDS are very active players in international trade depending on trade for food and most basic necessities. However, in some SIDS where domestic market size happens to be small, the private sector sometimes cannot be relied on for the import of basic commodities. Under such conditions, the government has to play this role, despite the WTO view that this practice distorts trade.
- **TRIPS (Trade-Related Intellectual Property Rights)** – the agreement for the protection of intellectual property imposes minimum, but relatively high standards of protection and enforcement of intellectual property rights that the SIDS must follow. The costs of adopting and implementing these IPR standards are extremely high for SIDS in financial and administrative terms. Further, the royalties on license fees payable by SIDS represent significant transfers to developed countries. It is recommended that SIDS be given

assistance to strengthen their institutional and administrative capacities, both to implement their international obligations as well as to protect their own IPRs.

- International Transport – in view of their remoteness, geographical location and small size of transaction, international transportation constitutes significantly higher per unit cost than for larger countries. It is therefore recommended that the international community develop special schemes and mechanisms to mitigate transport costs to these countries.

- Insurance and Re-insurance – based on their vulnerability to natural phenomena, the cost of insurance and re-insurance to producers/investors in SIDS tends to be relatively high. It is recommended that the international community in partnership with SIDS explore options to mitigate the impact of these costs on the price of final goods and services.

Recommendation 2: Inter-regional level – Collaborative mechanism for exploring new export market niches.

Identification of new market niches for SIDS, based on new or traditional products, is a necessity for further development of SIDS. One major obstacle to market development is cost. Collaboration in identification and development of new markets would reduce the cost. SIDS could also evaluate the viability of bundling investments for purpose of project financing in order to lower transaction costs. SIDS may want to consider the establishment of an ICT-based project processing facility and finance.sourcing facility to support sustainable use of natural resources. Such a mechanism is considered essential to the successful diversification of the agricultural sector in particular.

Natural Resources and Environment

Natural Resources

A UNESCO Report has stated that “*more than half of the world’s population currently live within 100 kilometres of the coast, and by 2025 it is estimated that 6.3 billion people, 75% of the world’s population will live in the coastal zone, in coastal mega-cities and many living in poverty on less than two dollars a day. In the last 40 years, the demand for fish has been growing at twice the rate of population growth. Over 500 million people depend on coral reefs for food and income, yet 70 per cent of reefs worldwide are threatened.*”⁸ The oceans do not divide SIDS, but unite them - to paraphrase the Constitution of the Federated States of Micronesia. For all SIDS, it is perhaps the single most under-utilised (and abused) resource that they possess.

One of the defining characteristics of SIDS, apart from the ocean, is the limited natural resources endowment. The vast majority of these countries have limited arable land, used primarily for the production of agricultural commodities for export (coffee, spices, sugar,

⁸ Co-Chairs summary, meeting of coastal and ocean experts at the UNESCO headquarters, for The Global Conference on Oceans and Coasts at Rio +10: Toward the 2002 World Summit on Sustainable Development, Johannesburg on December 3-7, 2001..

cocoa, copra). The development of this dominant form of land use has its foundation in colonial history, where the land resources were cultivated primarily to provide reliable sources of supply to the consumers in the mother countries. To support crop production, training and research capacity were established on a few islands to provide effective technical support to agriculture. Among the various islands that had gained independence, this relationship underwent significant change; in its place came preferential trade agreements.

Initially viewed as very beneficial (as the prices were above world market prices), the real impact would come in the form of economic globalisation and the new WTO rules on trade. The preferential trade agreements under which SIDS' products were priced above world market levels reflected not generosity, but the fact that production was more costly. In an increasingly global economy, SIDS' high costs of production for agricultural commodities has become a major contributor to overall vulnerability. SIDS need a collective approach to the generation of new knowledge for the agricultural sector. The current production costs of sugar, bananas, and cocoa in SIDS are now well above world prices. Nor does the high price of production include the damage to the environment, for which methodologies and tools have only recently become available. Environmental damage by agriculture includes pollution of fresh water, coastal and marine areas, loss of soil fertility, as well as reduction in biological diversity. Governments in a number of SIDS continue subsidising production of these crops for social reasons and to generate foreign exchange to pay for imports that include growing quantities of agricultural products.

In order to achieve the adoption and implementation of the above recommendation, it is further recommended that action be taken to assist SIDS in the creation of Regional Research Centres to provide research, training and information for national policy development. SIDS could greatly benefit from the development of holistic island system management and ecosystem-based management approaches at the national level, as well as the promotion of an integrated management approach through a regional oceans and seas policy. It will be necessary to ensure that SIDS have access to appropriate technology, data management systems, and related research and capacity-building.

Recommendation 1: National level – Review current land use policies to ensure consistency with sustainable utilization.

Given the relative scarcity of land, particularly agriculturally productive land, in many instances the unequal distribution of ownership imposes stringent social constraints upon the existing physical limitations, a sort of despotism of dearth. SIDS need to formulate and enact policies and legal tools that will minimize the inappropriate use of land (including speculation). Simultaneously, governments need to formulate incentives that encourage investment in sustainable agriculture. The conversion of agricultural lands located in vulnerable coastal areas into human settlements should not be permitted, as natural disasters could easily take lives and destroy investments, which are significantly more costly than rehabilitation of agricultural lands and replanting crops.

Recommendation 2: Inter-regional level – Enhance Mechanism for integrated agricultural and land resource management.

As outlined earlier, SIDS must become more efficient and environmentally responsible in the ways natural resources are utilised. The research team recommends that SIDS explore new mechanisms for funding agricultural training, research and applying appropriate technology in order to develop more beneficial agricultural systems and enhance production.

Recommendation 3: International level – Joint partnership for the sustainable development of marine resources.

It is recommended that developed country partners and international financial institutions and organizations should provide assistance for the development of special financial mechanisms or instruments to assist SIDS to build their national capacity to manage and develop their marine and coastal resources (including their fishery resources) in a sustainable manner.

Environment

With few exceptions, SIDS all have very limited water resources, and are all dependent upon rainfall and/or desalination plants. Consequently, like every other utility in SIDS, water is relatively costly and represents a constraint for development of agriculture and industry. As SIDS populations grow, the demand for water will increase. So far, the dominant policy response has been the establishment of very costly desalination plants, which also have high electrical energy requirements. Conservation, efficient use and recycling are options still awaiting evaluation. However, from a policy perspective, it is easier to issue a request for proposals to produce water by desalination in the international capital market than to design a programme based on conservation, efficient use, recycling, and put in place the education, monitoring and enforcement regime that would increase the productivity of current water resources. The desalination plant option is much easier to implement, but increases vulnerability.

Once the possessors of pristine ecosystems and breathtaking beauty, SIDS have had to sacrifice natural capital in order to generate economic resources. Also being sacrificed is the less visible chemical composition of the soil, coast, ocean, and fresh water. Chemical pollutants imported for agriculture, industry, transportation, health services, and households, is now a growing source of pollution. The ecosystems that make SIDS desirable tourist destinations are also very fragile. Continued pollution from sewage, solid waste and chemicals will have negative long-term effects on the environment and, overtime, will result in reduced capacity to provide environmental and economic services for the country. The degradation of critical ecosystems like coral reefs, mangrove forest and seagrass will reduce the natural defenses of the coast, increasing the potential of erosion from hurricanes and storms.

The small size of SIDS results in the vast majority of the population living in coastal cities, towns, and villages. The ease of access to ports and the heavy dependence on trade has resulted in populations living in areas that are prone to natural disasters, such as

hurricanes and cyclones. These low elevations also make the population vulnerable to vector-borne diseases associated with waterlogged conditions (dengue, malaria).

The Inter-Governmental Panel on Climate Change (IPCC) noted in its Third Assessment Report (IPCC, 2001)⁹ that Small Island States are in fact likely to be among the countries and communities most adversely affected by climate change as a result of their small size, economic dependence on a limited number of natural resource-based sectors (particularly agriculture, tourism and extractive industries), and limited human and financial capacities. The IPCC Report also points out that most small island countries are already extremely vulnerable to a range of natural hazards and to variations in oceanic and atmospheric conditions.

The IPCC further notes that while the severity of the threat will vary regionally, sea-level rise of the magnitude currently projected (i.e. 5 mm yr⁻¹, with a range of 2- 9 mm yr⁻¹), is expected to have disproportionate effects on the economic and social development of many small island states. Coastal land loss is already projected to have widespread adverse consequences. Indeed, it is argued that land loss from sea-level rise, especially on the low limestone islands, is likely to be of a magnitude that would disrupt virtually all economic and social sectors. This, in turn, will increase the vulnerability of coastal environments by reducing natural resilience and increasing the costs of adaptation.

The likely negative impact on tourism, water resources availability, and food supplies represent significant new threats to SIDS' continued viability. The reducing national vulnerability will be quite costly, based on the experience of the Maldives and other SIDS that have recently had to implement the equivalent of climate change adaptation measures to protect vulnerable populations and valuable infrastructure. This increased level of vulnerability has already resulted in SIDS having one of the highest property insurance cost structures.

Recommendations

Recommendation 1: National level – Establish the capacity to provide advice and guidance to government in integrated resource management.

Establish an interdisciplinary inter-sectoral committee to address natural resources integrated management, deforestation, and land degradation and waste management issues in a holistic manner.

Recommendation 2: National level – Increase public education and institutionalize in the form of education curriculum, environmental protection and proper management of natural resources.

Government and civil society groups need to undertake public education activities; modification of primary and secondary school curricula to ensure that social norms and practices that exert negative impacts on the ecosystem are discontinued. Curriculum development and teacher training could be pursued in a collective manner utilising ICT.

⁹ “Inter-Governmental Panel on Climate Change: Third Assessment Report.” 2001, IPCC..

Recommendation #3: Inter-regional level – Establish a participatory project investment fund

Special funding facilities that would provide investments for projects that take participatory approaches to solving utility supply problems (water, communications, sewage, electricity).

Recommendation 4: Inter-regional level – Establish a task force to evaluate the current level of food security and make recommendations as to improvement with particular emphasis on the influence of climate change.

External dependence on food may, under present economic levels and technology, be unavoidable; dependence on imported energy is not unavoidable. What definitely should be avoided is external dependence on both food and energy. Disruptions of earnings by the few categories of foreign exchange earners (fisheries, tourism) tend to create serious problems with the limited availability of resources to import food and energy. Such problems usually lead to requests for IMF interventions and their consequences.

Recommendation 5: Inter-regional level – Greater participation in the global environmental negotiations.

SIDS needs to explore mechanisms for improving participation in the global environmental conventions to ensure no repetition of the WTO situation. SIDS are facing costly adaptation measures that will result in changing priorities in order to address negative impacts of climate change. However, part of the cost of adaptation is being provided by the countries primarily responsible for the problem through the GEF and comparable mechanisms; SIDS governments are urged to ensure that they participate effectively as a group in order to make sure that their vulnerability concerns are addressed during all relevant negotiations, particularly on issues related to technology development and transfer. SIDS should also look at the TCDC mechanism as another means through which technology, development, and cooperation in areas such as anaerobic fermentation, marine-based pharmaceuticals, and mariculture could be pursued.

Natural Disaster Mitigation and Preparedness

Most SIDS depend heavily on agriculture, fisheries, and tourism, which makes them particularly vulnerable to external influences such as those associated with environmental hazards, cyclones, droughts, plant and animal diseases, some of which are exacerbated by human action, including land degradation, deforestation and global warming.

While hazards are inevitable and the elimination of all risks impossible, there are many technical measures, traditional practices, and public experience that can help SIDS reduce their vulnerability and build their resilience. A key factor is the capacity of SIDS to develop and use risk management programmes. Small island developing states are prone to extremely damaging natural disasters, primarily in the form of cyclones, volcanic eruptions and earthquakes. In some islands, the range of these disasters includes storm surges, landslides, extended droughts and extensive floods. A recent study by the former Office of the United Nations Disaster Relief Coordinator (currently the International Strategy for Disaster Reduction Secretariat, situated within the Office for the Coordination of Humanitarian Affairs) has shown that at least 13 of the 25 most disaster-

prone countries are SIDS. Because of climate change, such events, including drought, are projected to occur with increasing frequency and intensity in the future.

For countries affected by such natural disasters, those particular characteristics mean that the economic, social and environmental consequences are long-lasting and that the costs of rehabilitation are high as a percentage of GNP. For similar reasons, the impact of oil-spills and other environmental disasters can also be severe. The frequency and unpredictability in the occurrence of natural disasters seriously undermine the capacity of SIDS to achieve sustainable development. Specifically they exacerbate the vulnerability of the natural environment and infrastructure of these countries, and constrain their efforts to preserve their economic viability and insurability

Recommendations: National Level – Implementation of the following actions:

- Develop and implement an integrated approach to vulnerability reduction in key sectors, particularly agriculture, tourism and fisheries.
- Sustainable development planning, including physical planning at the local and national levels, establishing and utilising better tools such as Geological Information System (GIS).
- Increased use of financial instruments and incentives for risk reduction.
- Initiate and review legislation, planning, building and development standards and codes.
- Proactive and participatory approaches, including incremental development, to achieve better planning, building and development.
- Improve public education and awareness and enforcement.
- Strengthen capacity and realise better use of existing resources to achieve the above.
- Review present system of donor coordination to improve effectiveness, and minimize duplication.

Recommendations: Regional Level - Increasing inter-regional cooperation in order to:

- Strengthen regional networks for emergency preparedness, including GIS Hazard Mapping, up-to-date weather information, and early warning and emergency response systems.
- Implement regional approaches to disaster management, including coordinated responses, emergency relief funds and other potential cooperation mechanisms to face natural disasters.
- Facilitate inter-regional information exchange, including on regional policy initiatives such as Pacific CHARM and C-DERA from the Caribbean, capacity-building, model legislation, and planning and building standards.
- Operationalising of the environmental vulnerability index and other indicators to help measure and assess SIDS vulnerability to hazards.

Recommendations: International Level

- Encourage international donor assistance to local communities and appropriate national and regional organizations of SIDS, to support efforts in comprehensive hazard and risk management, disaster prevention, mitigation and preparedness and to help relieve the consequences of disasters, extreme weather events and other emergencies.

- Encourage international ratification and enforcement of agreements aimed at reducing human impact on the environment and climate.
- Encourage the establishment of a special fund to help finance disaster mitigation and preparedness and response activities in SIDS.

Investment

In light of their small size and vulnerability SIDS do not easily attract FDI in a competitive profit-maximising environment. Further, multilateral financial institutions do not provide loans to many SIDS because of issues of credit-worthiness.

Recommendation 1: National – developing an enabling environment for FDI.

SIDS need to implement appropriate actions to improve their internal investment climate including simplification of administrative arrangement. Consideration should be given to the establishment of a facility that allows SIDS to exchange policy information and information on best practices and to develop the monitoring and evaluation capacity to help keep governments abreast of the consequences of interventions

Recommendation 2: Inter-regional level – development of a policy exchange facility for FDI.

One of the basic requirements for attracting FDI is getting the policy and social environment right. The research team thinks that a facility should be established to allow SIDS to exchange policy information in this area as well.

Recommendation 3: Inter-regional level – establish of a regional mechanism consisting of the private sector, government and NGOs to provide oversight of the financial sector.

Consideration by SIDS governments and private sector of the establishment of a mechanism for oversight of the financial sector by financial professionals from SIDS. The relative infancy of the financial sector makes it prone to policy and reporting weaknesses. In a number of developing countries, including SIDS, financial sector weakness has resulted in significant negative unintended consequences on national economies and public confidence. The research team's recommendation is that SIDS assess the potential benefits of such a mechanism as part of reducing economic vulnerability.

Recommendation 4: International level - petition for waiver on constraints on investment incentives.

The current WTO constraints on investment incentives do not allow SIDS the flexibility to use incentives to attract investments. Given the difficulties in these areas and the critical need for FDI, the WTO should be asked to allow SIDS an exemption in this regard.

Recommendation 5: International level – pursue understanding with multilateral financial institutions as to SIDS' special status.

It is essential that the multilateral financial institutions recognize the special situation of SIDS and adopt a broader set of criteria, i.e., in addition to GNP per capita for eligibility for access to concessional financing.

Cross-Cutting Issues

Planning

A principal explanation for the weak performance of SIDS' governments is failure to plan, despite expenditures of significant resources on consultants, predominantly foreign experts. The research team argues that, where they exist, the failures in development planning processes are not due to the level of state intervention, but to their inappropriate design and reactive and prescriptive nature, as well as the exclusion of popular participation in the design process. While participation is considered essential, in practice it requires investment of time and resources.

Many SIDS do not have development planning systems. Integrated environmental / resource use planning systems provide the means for integrating economic, social and environmental considerations for sustainable development. Strategic policy development in tourism, water management, economic and social development, urban management, waste management, land degradation, climate change and biodiversity all benefit significantly from integrated planning systems that enable implementation, mitigation and coordination.

As SIDS have limited ability to absorb natural and human-induced shocks, as well as limited resources, strategic assessment and long-term planning of land use and development provides an effective and efficient means of addressing vulnerability. Planning systems provide the framework for proactive measures, as well as vehicles for mainstreaming environment into economic development pursuits, the multi-use of data, the provision of consistent guidance, and early participation of the community. They provide the means for instituting confidence in decision-making, certainty in processes and security in "investment" — all essential for sustainable investment and environmental management.

Successful planning begins with institutional capacity that depends on the capabilities and motivation of the professionals, which in turn is a function of the training, education system and human resources development strategy.

Minimizing exposure to external shocks in SIDS, the research team concludes, starts with addressing the problems of poor communities that are very strongly linked to:

- inappropriate development strategies employed in the past;
- lack of competitiveness of many SIDS;
- economic restructuring policies that have been implemented without due regard to social or environmental impact, and that have increased overall national vulnerability as a result; and
- the inability of many governments to sustain public expenditure to realise development objectives (education, and basic social infrastructure) due primarily to shortfalls in revenue -- resulting from reduced demand/ declining prices for commodities, reduction in tourism arrivals, etc.

The single most important action on the part of governments for improving planning is to undertake comprehensive capacity-building. The importance of capacity-building has been emphasized in the Commonwealth Secretariat/World Bank Task Force Report (2000). Limited capacity has also been cited as one of the principal reasons responsible for the slow progress with the implementation of the BPOA. The GEF, in partnership with the UNDP, has devoted special attention to the capacity needs at the individual, institutional and systemic levels needed in SIDS for implementation of the global environmental conventions.

Recommendation 1: National level – Provide support to institute or enhance development resource use planning systems.

Planning systems need to be proactive (able to “map out” opportunities), flexible, cost-efficient and tailored to the specific needs, geo-physical and political characteristics of SIDS. Models for adaptation, adoption of reference should be generated to enable national governments to choose the means and types of institution. Planning systems should incorporate means for pre- and post-development assessment/ management; policy, guideline and criteria development, integrated administration, integrated use and characterization of data. They should also be used as a means to institute the “user pays principle” to address hidden costs and leakages of financial multipliers that result from development/investment.

Recommendation 2: National level – Undertake an evaluation of the present institutional framework with regard to improving donor relations.

Redefining the institutional framework of the government/donor relationship to make planning, implementation, monitoring and evaluation more efficient. The number of meetings and managing donor relations was a major complaint of government professionals, with claims that it is a significant contributor to inefficiency. Reorganisation of the institutional framework so that it becomes consistent with the principles of sustainable development should lead to increased efficiency. Exploring the possibility of persuading donors to coordinate assistance focused on key areas rather than individual projects would also significantly increase this efficiency.

Recommendation 3: National level – Institutionalise public participation in national planning activities.

That the governments of SIDS should institutionalise the practice of involving local participation in planning and design and implementation of capacity-building initiatives in order to make them more relevant and effective.

Recommendation 4: Inter-regional level – Establish an inter-regional task force to look at current focus of academic training and research at the University of the West Indies, the University of Mauritius, the University of Papua New Guinea, the University of Malta and the University of the South Pacific on the relevance of their current curricula to the knowledge and skills requirements of the graduates who will, in the future, be providing professional expertise to SIDS.

The major question confronting SIDS is where to begin and how to proceed with capacity- building at the different levels required. SIDS as a group of countries have two regional tertiary institutions established prior to independence to provide the skills needed to maintain effective functioning of the countries based on criteria laid down by their former colonial administrators. To a large extent, the disciplines, subject matter and research has changed only marginally over time with regard to the training of professionals to take leadership roles in the area of sustainable development.

To the extent that this accurately describes the present situation in the key educational institutions, the governments of SIDS will have to institute changes so that, over time, the focus of these principal tertiary institutions becomes demand-driven, i.e., respond to evolving challenges instead of continuing to teach conventional disciplines. Without change, the tertiary institutions cannot produce the professionals (in either quantity or quality) needed to address the challenges. Making SIDS dependent on non-SIDS experts, who are very costly, adds to SIDS' vulnerability. The research team recommends that governments in SIDS establish a inter-regional task force to look at the current focus of academic training and research at the UWI and the USP and how relevant is the current curricula to the knowledge and skills requirement of the graduates who will provide professional expertise.

Recommendation 5: Inter-regional level – Examine the feasibility of a SIDS collective approach to tertiary education and the development of SIDS-relevant core curricula for primary and secondary education.

Based on the finding on education relevance, start evaluating the feasibility of a SIDS collective approach to tertiary education and the development of a SIDS-relevant core curriculum for primary and secondary education. Among key areas for tertiary education, curricula should give greater focus, include coastal zone management, marine resources management, fisheries, energy management, climate change, and environmental law. Additionally, specialized skills in areas such as negotiation, conflict resolution, project cycle management, information and data management, and the use of vulnerability tools should be integrated into human resource development strategies.

The feasibility evaluation exercise should look at the role that ICT could play in facilitating cost-effective delivery of curricula and the fostering of research networks.

Recommendation 6: Inter-regional level – Undertake an evaluation of present national development planning to see if it is structurally biased towards increasing vulnerability.

Actively reducing the growing vulnerability requires departures from the existing process that in the majority of cases are predominantly sectoral, have limited participation, a short time horizon, and are very dependent on foreign expertise.

Reducing vulnerability requires a planning process that is integrated, synergistic, holistic, participatory, long-term, with clear goals with outcomes and monitoring systems. These planning principles are the foundation of sustainable development and are accepted by SIDS in the form of the 1994 Barbados Plan of Action for the Sustainable Development of SIDS.

Recommendation 7: Inter-regional level – Donor support to finalise work on vulnerability index

As indicated earlier, monitoring has been a weak area in the planning processes of SIDS. The research team recommends that SIDS work with donors to finalise the work on indices (economic, environmental and social) so that they can be used to improve the planning process. Availability of the tools must, however, be complemented by effective data and information collection systems in the countries to ensure the usefulness of these indices.

Recommendation 8: Inter-regional level – Evaluating a possible mechanism of a SIDS Skills Bank to help address professional capacity needs.

Given the continued anticipated loss of professionals to better salaries and incentives in richer economies, SIDS will have to put in place mechanisms to share and develop professionals in the key areas in order to ensure the availability of skills. In order to address retention, SIDS governments should evaluate the feasibility of establishing a Skills Bank of SIDS professionals, possibly using the infrastructure of UN-DESA SIDSnet. The Skills Bank would also provide governments with a practical mechanism for sharing developmental experiences across SIDS and a ready source of experienced professionals to assist with planning, implementation, evaluation and monitoring of policy and to provide technical support to negotiations (trade, donor assistance, environment, oceans). SIDS professionals, approved by their countries to participate, would have the opportunities to supplement their income while working with and interacting with other SIDS professional on similar challenges. The inter-regional team from Recommendation 2 (above) could also be tasked with evaluating the feasibility of the Skills Bank, including how such a mechanism would mobilise the needed resources.

Recommendation 9: National level – Improving data collection mechanisms to provide relevant information to support planning.

In the majority of SIDS, the available information is not adequate to support sound planning. It is therefore recommended that governments, using the vulnerability indices tools (economic and environmental) and other monitoring mechanisms, identify the most critical data and information and then put in place the needed mechanisms for collection and processing and dissemination. The systemic collection of information is critical in managing vulnerability that requires monitoring responses to policy interventions.

Human Resources Development

The most important resources in SIDS are people, with their skills and creative imagination. The development of their capabilities is an essential prerequisite for SIDS to become internationally competitive in high value-added services. It is therefore imperative that education receive the highest priority in the SIDS strategy to manage their vulnerabilities. Traditional curricula will have to be modified to expose and sensitise students to the challenges faced by SIDS in general, as well as their concrete manifestations in particular islands.

Once again, the need for capacity-building in SIDS presents itself in the education and research institutions. Further, efforts should be addressed at all levels of the education system so as to begin the process of sensitization to vulnerabilities among children, as well as to educate and train technical persons at the tertiary level.

Human resource development and capacity building undergird all aspects of human endeavor and are fundamental requirements for ensuring sustainability in SIDS. Indeed, the acquisition of appropriate skills and technologies constitute an essential part of the process of building the resilience needed to reduce vulnerability to global threats, whether natural, economic, social or political.

The 1990s witnessed the maturation and wide-scale deployment across the developed countries of new technologies for information management and communication. While the use of ICT is now regarded as standard operating procedure for businesses, government and civil society groups in the developed countries, it is just beginning to penetrate SIDS. Based on the lessons from the developed countries, ICT has even greater potential to transform the ways in which developing countries conduct business and to help to address the persistent social problems of education and human resources development. Delays in exploiting the opportunities offered by ICT threaten to further increase the already wide gaps in the quality of life for those global citizens who live in developing countries, particularly those in SIDS.

Recommendation 1: National level – Governments and donors need to significantly increase the resources allocated for human resource development consistent with the goal of the Social Summit and the in the spirit of Agenda 21. The incorporation of ICT should be given highest consideration in the formulation of strategies in this area.

Governance

Fragmentation and social disruption at both the national and regional levels constrain the ability of SIDS to confront certain inescapable, dynamic global realities and challenges. Further, weaknesses in management at the national level are also reflected at the regional level. Political systems in SIDS are undergoing considerable stress as economic forces for integration outstrip the capacity of SIDS to make the necessary political adjustments. It is clear that traditional concepts of sovereignty cannot cope with the significant cross-country threats, such as changes in the multilateral trading system, HIV/AIDS, money laundering and drug trafficking.

The imperative now is for SIDS to forge new forms of governance that allow space for elements of civil society to interact freely and participate meaningfully in the formulation and implementation of sustainable development policies at the national and regional level. More specifically, an integrated process of planning and strategizing is required to bring together the political, economic, environmental, spatial and social aspects of sustainable development at the sub-national, national and regional levels in a routine manner.

Policies and programmes to reduce vulnerability and promote sustainable development should transcend partisan politics, reflecting instead the welfare of the citizens. Governance concern the implementation of national development visions developed in accordance with the principles of Agenda 21 (participation, information and integration), rather than the formulation of alternative strategies for development by successive administrations.

Recommendation 1: International level - SIDS should seek support from the international community to establish and/or strengthen governance structures that emphasise the following:

- An efficient supply of information using conventional and emerging technologies and processes;
- A culture of interaction and integration among disciplines, sectors and geographic areas;
- An effective regional planning and development process that is driven by a clear consensus on the strategic approaches that are most relevant to SIDS;
- A framework that facilitates ongoing technical cooperation among SIDS;
- A framework that permits effective monitoring and evaluation of approved plans, policies and programmes at the sub-national, national and regional levels;
- A mechanism that facilitates the involvement of local civil society and the external development partners in the development process.

b. Building resilience

Vulnerability is an aggregate measure of exposure to risk or hazards brought about by economic strife, environmental changes such as climate change, government policies or even those caused by internal events and forces resulting from a combination of factors. In terms of SIDS, it is especially emphasised that the definition of vulnerability also account for the lack of capacity in SIDS to respond to the risks or hazards, thus making the resilience of these countries comparatively much lower than that of other developing countries. Because SIDS are small, their human and environmental resources have limited capacity to absorb shocks and therefore are not as resilient as other developing countries. The ability of SIDS to strengthen their domestic capacity of supply and to participate increasingly in world trade depends largely upon the development of core services, namely transport, financial and telecommunication services. Once again, SIDS, because of their size, are at a comparative disadvantage in these areas of services.

The transport and communication services of SIDS, both air and maritime, have difficulties in facing competition from the mega-suppliers of big countries. Handicapped by size, the domestic firms do not have the capacity to inject the necessary investment in these key sectors. Even when foreign investment is allowed, the foreign companies are not interested in investing in a small market unless allowed to monopolise it. Hence, many SIDS difficulties in attracting FDI.

The financial services sector of SIDS is too weak to resist the OECD pressure to secure high standards of compliance in terms of transparency, reporting the exchange of bank information, and giving up the bank secrecy and client confidentiality. Pursuing

sustainable economic development strategies will enhance the capabilities of SIDS to deflect and mitigate external shocks.

Forging strategic alliances to overcome size constraints

Size will remain the major constraint in developing and exploiting marine resources. SIDS will have to forge alliances among themselves and with the large industrial countries to harness the potential of their vast marine resources. The strategy should seek to maximise rents of various forms associated with licenses and permits granted to large industrial producers that wish to exploit the marine resources of SIDS.

Capacity-building

The strengthening of both public and private sector institutions must be a priority in a SIDS strategy to manage vulnerability. A good example of the need to build institutional capacity in the public sector is the requirement to implement the TRIPS agreement. This will present additional costs to SIDS while being potentially the sanction for further transfers of wealth from SIDS. Assistance from international donors on terms affordable to SIDS will be a critical input into capacity building at all levels of all sectors.

Develop competitiveness strategies

It is equally necessary to develop the competitiveness of private productive enterprises, for it is they who conduct the nation's trade. Competitiveness in the modern world demands a greater use of knowledge to inform decision-making, to provide services at international standards, and to utilize modern technologies in production processes. It is also enhanced through niche market export strategy, flexible specialisation, enhanced entrepreneurship and, where appropriate, economic deregulation.

Promoting stability in the macroeconomic environment

Foreign direct investment will be a major driver for the process of transforming the economies of SIDS. A stable macroeconomic environment and a climate that inspires the confidence of local and international business interests constitute the fundamental framework for attracting foreign investment. Schemes for insuring foreign investments against risks will make SIDS more attractive to international investors.

Economic Diversification

It is imperative that the economies of SIDS undergo rapid diversification of their export commodities away from traditional products in declining demand, and towards more high value-added commodities and services in increasing demand, for example, organic agricultural products. To the new products and new services must be added new markets to reduce the concentration of the export earnings of SIDS around a narrow range of products and markets.

The thinness of the economic structure can be overcome only with increased diversification of productive activity. Investment has to be channeled into new activities, particularly ICT-based services, cultural services, and the development of marine

resources on sustainable bases. Here, investment should be interpreted broadly to include investment in human resources to enhance the capabilities and the productivity of the labour force.

Reducing dependence on imported energy

Energy dependence is a major source of economic vulnerability for many SIDS. Modern research has produced commercially feasible options of energy supply, such as wind, solar and ocean tidal energy. Indeed, many SIDS are particularly suited to these options because of their geographical location. A comprehensive assessment of the energy resources, and the current and projected patterns of energy use should guide governments in articulating energy strategies for sustainable development.

Developing capacity in the management of marine resources

SIDS are distinguished by the abundance of marine resources. They remain largely untapped for want of knowledge of the resources and the commercially viable ways of utilising them, the necessary investment and training. Some success has been achieved in utilising coastal marine resources for tourism, but much more can be done if adequate environmental management systems are in place at the national and the enterprise levels. Harvesting the fish, other marine animals and plants, and supplying desalinated water will require strategic alliances among enterprises based in SIDS and between these enterprises and large international commercial producers.

Use of ICT

The constraint of size is becoming less binding as the technological revolution proceeds. New activities that utilise knowledge intensively are less subject to diseconomies of scale than production processes that transform materials from nature into consumption and production goods. ICT-based economic activities present lucrative opportunities for SIDS with the requisite infrastructure and human resources, and many have already begun to develop industries. Again, Singapore represents the best example of the range of possibilities in the ICT industries that a small island can establish.

Education

Modern production activities require an educated and well-trained work force that can adapt readily to the changing technological demands. This is especially true if SIDS are to develop the appropriate comparative advantages in high value-added services, such as ICT and finance. Indeed, public and private investment in human resources must become a major priority for the management of economic vulnerability. The education plans for SIDS must target carefully the development of the cultural services that can be provided on the basis of traditional cultural practices. Where these practices are economically relevant, the chance of SIDS maintaining their cultural identities will be more feasible. In this regard, the collaboration of tertiary institutions and research institutions based in SIDS will enhance their collective capabilities for developing the requisite human resources for economic resilience

Tapping expertise from migrant overseas communities

SIDS can tap significant financial and human resources in their migrant communities overseas. It has already been noted how important remittances are to the economies of SIDS. Much more can be done to encourage repatriation of the services of SIDS nationals, especially where reliable, efficient and reasonably priced air transport services are available and where communication services facilitate the delivery of services via electronic means, such as the Internet. Equally important is that these communities are natural bridgeheads into the markets of the developed countries.

SIDS-SIDS cooperation.

There are many areas for SIDS to provide mutual technical assistance to each other. Singapore already has a well-established technical assistance programme for sharing its experiences with SIDS that could serve as a model for other programmes of cooperation. Education was earlier identified as another important area for mutually beneficial cooperation, along with planning and implementing projects for disaster mitigation. Special attention should be given to promoting cooperation and strategic alliances among firms and other productive enterprises based in SIDS to supply regional and international markets.

This is the most feasible approach to developing productive units with the minimum critical mass to compete successfully in the global economy. SIDS will have to no option but to pursue integration based on the current global trends. In the Western Hemisphere, the impending launch of the FTAA in 2005 will impact directly on Caribbean SIDS in more far-reaching ways than the WTO. The initiation of the process of integrating Caribbean economies in the CARICOM Single Market and Economy is being accelerated as an element of the strategy to engage the FTAA process. The FTAA process is accurately described as “WTO plus”. Malta and Cyprus are expected to join the European Union in 2004. Similarly, there is a strong integration movement in the Pacific that the SIDS in that region cannot ignore.